

Sumanta Chakraborty

List of Publications by Year in descending order

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Version: 2024-02-01

98
papers

2,111
citations

186265

28
h-index

276875

41
g-index

100
all docs

100
docs citations

100
times ranked

886
citing authors

#	ARTICLE	IF	CITATIONS
1	Microscopic origin of Einstein's field equations and the raison d'Être for a positive cosmological constant. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2022, 824, 136828.	4.1	6
2	Hilltop Inflation and Generation of Helical Magnetic Field. Universe, 2022, 8, 26.	2.5	2
3	Supertranslations at timelike infinity. Journal of High Energy Physics, 2022, 2022, 1.	4.7	2
4	Non-trivial time crystal-like ground state for gravitational perturbation in quadratic gravity. Physics of the Dark Universe, 2022, 35, 100976.	4.9	1
5	Bouncing with shear: implications from quantum cosmology. Journal of Cosmology and Astroparticle Physics, 2022, 2022, 008.	5.4	7
6	Scalar perturbations around rotating regular black holes and wormholes: Quasinormal modes, ergoregion instability, and superradiance. Physical Review D, 2022, 105, .	4.7	27
7	Strong cosmic censorship conjecture for a charged BTZ black hole. Journal of High Energy Physics, 2022, 2022, .	4.7	3
8	Weiss variation for general boundaries. General Relativity and Gravitation, 2022, 54, .	2.0	6
9	Eddington gravity with matter: An emergent perspective. Physical Review D, 2021, 103, .	4.7	6
10	Perturbations of the almost Killing equation and their implications. Physical Review D, 2021, 103, .	4.7	0
11	Ergoregion instability and echoes for braneworld black holes: Scalar, electromagnetic, and gravitational perturbations. Physical Review D, 2021, 103, .	4.7	26
12	No-boundary wave function, Wheeler-DeWitt equation, and path integral analysis of the bouncing quantum cosmology. Physical Review D, 2021, 103, .	4.7	9
13	Looking for extra dimensions in the observed quasi-periodic oscillations of black holes. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 037.	5.4	10
14	Gravitational multipole moments for asymptotically de Sitter spacetimes. Physical Review D, 2021, 104, .	4.7	4
15	Bound on Photon Circular Orbits in General Relativity and Beyond. Galaxies, 2021, 9, 96.	3.0	5
16	Tidal heating of black holes and exotic compact objects on the brane. Physical Review D, 2021, 104, .	4.7	12
17	Embedding into flat spacetime and black hole thermodynamics. Modern Physics Letters A, 2020, 35, 2050013.	1.2	1
18	Softly broken conformal symmetry with higher curvature terms. Physical Review D, 2020, 102, .	4.7	1

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19	Echoes from braneworld black holes. <i>Physical Review D</i> , 2020, 101, .	4.7	45
20	Boundary term in the gravitational action is the heat content of the null surfaces. <i>Physical Review D</i> , 2020, 101, .	4.7	8
21	Limits on stellar structures in Lovelock theories of gravity. <i>Physics of the Dark Universe</i> , 2020, 30, 100658.	4.9	19
22	Silhouette of M87*: A new window to peek into the world of hidden dimensions. <i>Physical Review D</i> , 2020, 101, .	4.7	127
23	Strong cosmic censorship conjecture in higher curvature gravity. <i>Physical Review D</i> , 2020, 101, .	4.7	15
24	Constraining extra-spatial dimensions with observations of GW170817. <i>Classical and Quantum Gravity</i> , 2020, 37, 105004.	4.0	36
25	Strong cosmic censorship conjecture with NUT charge and conformal coupling. <i>Classical and Quantum Gravity</i> , 2020, 37, 195004.	4.0	9
26	First law of black hole mechanics with fermions. <i>Classical and Quantum Gravity</i> , 2020, 37, 205014.	4.0	10
27	Multipole moments of compact objects with NUT charge: Theoretical and observational implications. <i>Physical Review D</i> , 2020, 102, .	4.7	15
28	Decoding signatures of extra dimensions and estimating spin of quasars from the continuum spectrum. <i>Physical Review D</i> , 2019, 100, .	4.7	24
29	Raychaudhuri equation with zero point length. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2019, 797, 134877.	4.1	13
30	Decoding infrared imprints of quantum origins of black holes. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2019, 789, 276-286.	4.1	4
31	Tidal Love numbers of black holes and neutron stars in the presence of higher dimensions: Implications of GW170817. <i>Physical Review D</i> , 2019, 99, .	4.7	32
32	Understanding photon sphere and black hole shadow in dynamically evolving spacetimes. <i>Physical Review D</i> , 2019, 99, .	4.7	60
33	Fate of strong cosmic censorship conjecture in presence of higher spacetime dimensions. <i>Journal of High Energy Physics</i> , 2019, 2019, 1.	4.7	44
34	Null boundary terms for Lanczos's Lovelock gravity. <i>General Relativity and Gravitation</i> , 2019, 51, 1.	2.0	17
35	On some novel features of the Kerr's Newman-NUT spacetime. <i>European Physical Journal C</i> , 2019, 79, 1.	3.9	26
36	Radion induced inflation on nonflat brane and modulus stabilization. <i>Physical Review D</i> , 2019, 99, .	4.7	13

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37	Generalized Schwinger effect and particle production in an expanding universe. <i>Physical Review D</i> , 2019, 100, .	4.7	7
38	1/r potential in higher dimensions. <i>European Physical Journal C</i> , 2018, 78, 1.	3.9	18
39	Noether current, black hole entropy and spacetime torsion. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2018, 786, 432-441.	4.1	15
40	Late-time acceleration driven by shift-symmetric Galileon in the presence of torsion. <i>Physical Review D</i> , 2018, 98, .	4.7	7
41	A comment on generalized Schwinger effect. <i>European Physical Journal C</i> , 2018, 78, 1.	3.9	2
42	Inflation driven by Einstein-Gauss-Bonnet gravity. <i>Physical Review D</i> , 2018, 98, .	4.7	53
43	On the physical process first law for dynamical black holes. <i>Journal of High Energy Physics</i> , 2018, 2018, 1.	4.7	8
44	Signatures of extra dimensions in gravitational waves from black hole quasinormal modes. <i>Physical Review D</i> , 2018, 97, .	4.7	39
45	Unruh effect for inertial observers through vacuum correlations. <i>European Physical Journal C</i> , 2018, 78, 1.	3.9	5
46	Field Equations for Lovelock Gravity: An Alternative Route. <i>Advances in High Energy Physics</i> , 2018, 2018, 1-6.	1.1	2
47	Packing extra mass in compact stellar structures: an interplay between Kalb-Ramond field and extra dimensions. <i>Journal of Cosmology and Astroparticle Physics</i> , 2018, 2018, 032-032.	5.4	13
48	Inverting a normal harmonic oscillator: physical interpretation and applications. <i>General Relativity and Gravitation</i> , 2018, 50, 1.	2.0	14
49	Horndeski theories confront the Gravity Probe B experiment. <i>Physical Review D</i> , 2018, 97, .	4.7	30
50	Boundary Terms of the Einstein-Hilbert Action. <i>Fundamental Theories of Physics</i> , 2017, , 43-59.	0.3	28
51	Constraining some Horndeski gravity theories. <i>Physical Review D</i> , 2017, 95, .	4.7	54
52	Buchdahl compactness limit for a pure Lovelock static fluid star. <i>Physical Review D</i> , 2017, 95, .	4.7	30
53	Entropy of a box of gas in an external gravitational field revisited. <i>Physical Review D</i> , 2017, 96, .	4.7	10
54	Excavating black hole continuum spectrum: Possible signatures of scalar hairs and of higher dimensions. <i>Physical Review D</i> , 2017, 96, .	4.7	23

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55	A novel derivation of the boundary term for the action in Lanczos's Lovelock gravity. <i>General Relativity and Gravitation</i> , 2017, 49, 1.	2.0	21
56	Gravity stabilizes itself. <i>European Physical Journal C</i> , 2017, 77, 1.	3.9	17
57	Cosmological implications of a shift symmetric Galileon field. <i>Physical Review D</i> , 2017, 96, .	4.7	6
58	Black Holes: Eliminating Information or Illuminating New Physics?. <i>Universe</i> , 2017, 3, 55.	2.5	41
59	Strong gravitational lensing—a probe for extra dimensions and Kalb-Ramond field. <i>Journal of Cosmology and Astroparticle Physics</i> , 2017, 2017, 045-045.	5.4	67
60	Null Surface Geometry and Associated Thermodynamics. <i>Springer Theses</i> , 2017, , 109-143.	0.1	0
61	A Quantum Peek Inside the Black Hole Event Horizon. <i>Springer Theses</i> , 2017, , 157-198.	0.1	0
62	Dynamic Realization of the Unruh Effect for a Geodesic Observer. <i>Springer Theses</i> , 2017, , 229-245.	0.1	0
63	Lanczos-Lovelock Gravity from a Thermodynamic Perspective. <i>Springer Theses</i> , 2017, , 85-107.	0.1	0
64	It Is All About Gravity. <i>Springer Theses</i> , 2017, , 3-20.	0.1	0
65	Entropy of a Generic Null Surface from Its Associated Virasoro Algebra. <i>Springer Theses</i> , 2017, , 145-153.	0.1	0
66	Entropy of a generic null surface from its associated Virasoro algebra. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2016, 763, 347-351.	4.1	16
67	Solving higher curvature gravity theories. <i>European Physical Journal C</i> , 2016, 76, 1.	3.9	60
68	Kinematics of radion field: a possible source of dark matter. <i>European Physical Journal C</i> , 2016, 76, 1.	3.9	9
69	Spacetime with zero point length is two-dimensional at the Planck scale. <i>General Relativity and Gravitation</i> , 2016, 48, 1.	2.0	37
70	Information retrieval from black holes. <i>Physical Review D</i> , 2016, 94, .	4.7	16
71	Quantum leaps of black holes: Magnifying glasses of quantum gravity. <i>International Journal of Modern Physics D</i> , 2016, 25, 1644024.	2.1	4
72	Spherically symmetric brane in a bulk of $f(R)$ (R) and Gauss-Bonnet gravity. <i>Classical and Quantum Gravity</i> , 2016, 33, 225001.	4.0	41

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73	A boundary term for the gravitational action with null boundaries. General Relativity and Gravitation, 2016, 48, 1.	2.0	139
74	Discrete quantum spectrum of black holes. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 755, 37-42.	4.1	11
75	Solutions on a brane in a bulk spacetime with Kalb-Ramond field. Annals of Physics, 2016, 367, 258-279.	2.8	11
76	Variational principle for gravity with null and non-null boundaries: a unified boundary counter-term. European Physical Journal C, 2016, 76, 1.	3.9	49
77	Metric factorizability and equivalence of brane world models with Brans-Dicke theory. Physical Review D, 2015, 92, .	4.7	4
78	Thermodynamical interpretation of the geometrical variables associated with null surfaces. Physical Review D, 2015, 92, .	4.7	65
79	Lanczos-Lovelock gravity from a thermodynamic perspective. Journal of High Energy Physics, 2015, 2015, 1.	4.7	52
80	Brown-York quasilocal energy in Lanczos-Lovelock gravity and black hole horizons. Journal of High Energy Physics, 2015, 2015, 1-19.	4.7	15
81	Gravitational field equations near an arbitrary null surface expressed as a thermodynamic identity. Journal of High Energy Physics, 2015, 2015, 1.	4.7	29
82	Effective gravitational field equations on m-brane embedded in n-dimensional bulk of Einstein and $f(R)$ gravity. European Physical Journal C, 2015, 75, 1.	3.9	41
83	Aspects of neutrino oscillation in alternative gravity theories. Journal of Cosmology and Astroparticle Physics, 2015, 2015, 019-019.	5.4	31
84	Equilibrium configuration of perfect fluid orbiting around black holes in some classes of alternative gravity theories. Classical and Quantum Gravity, 2015, 32, 075007.	4.0	9
85	Spherically symmetric brane spacetime with bulk $f(R)$ gravity. European Physical Journal C, 2015, 75, 1.	3.9	65
86	A quantum peek inside the black hole event horizon. Journal of High Energy Physics, 2015, 2015, 1.	4.7	22
87	Evolution of spacetime arises due to the departure from holographic equipartition in all Lanczos-Lovelock theories of gravity. Physical Review D, 2014, 90, .	4.7	37
88	Bulk scalar field in warped extra dimensional models. Physical Review D, 2014, 89, .	4.7	9
89	Geometrical variables with direct thermodynamic significance in Lanczos-Lovelock gravity. Physical Review D, 2014, 90, .	4.7	34
90	Black hole kinematics: The ϵ -vacuum energy density and flux for different observers. Physical Review D, 2014, 90, .	4.7	23

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91	Solar system constraints on alternative gravity theories. <i>Physical Review D</i> , 2014, 89, .	4.7	33
92	Radion cosmology and stabilization. <i>European Physical Journal C</i> , 2014, 74, 1.	3.9	23
93	Constraining alternative gravity theories using the solar neutrino problem. <i>Classical and Quantum Gravity</i> , 2014, 31, 055005.	4.0	12
94	Anomalous effective action, Noether current, Virasoro algebra and Horizon entropy. <i>European Physical Journal C</i> , 2014, 74, 1.	3.9	11
95	Higher curvature gravity at the LHC. <i>Physical Review D</i> , 2014, 90, .	4.7	20
96	Velocity measurements in some classes of alternative gravity theories. <i>Astrophysics and Space Science</i> , 2013, 347, 411-421.	1.4	5
97	Trajectory around a spherically symmetric non-rotating black hole. <i>Canadian Journal of Physics</i> , 2011, 89, 689-695.	1.1	14
98	Non-linear dielectric effect in the isotropic phase above the isotropic-cholesteric phase transition. <i>Chemical Physics</i> , 2011, 389, 64-67.	1.9	3